REMARKS

The Office Action dated May 19, 2003 has been received and carefully noted. The above amendments and the following remarks are submitted as a full and complete response thereto. Claims 1, 2, 4, 5, 7-12, 14 and 15 have been withdrawn from consideration and claim 21 has been allowed. By this Amendment, claims 18, 19 and 22 have been amended to more particularly point out and distinctly claim the invention. No new matter has been added or amendments made that narrow the scope of any elements of any claims. Accordingly, claims 18, 19 and 22 are pending in this application and are submitted for consideration.

However, it is again noted that claims 1, 2, and 4 should also be considered since they are generic claims, as stated by the Examiner in the Office Action dated March 12, 2001. To date, Applicants have not received an Office Action addressing the subject matter of generic claims 1, 2 and 4. Therefore, Applicants respectfully request an Office Action addressing the subject matter of generic claims 1, 2 and 4.

Applicants acknowledge and thank the Examiner for indicating that claim 21 is allowed over the prior art.

Claims 18 and 22 were rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter that was not described in the specification. By this amendment, the claims have been amended. Support for the amendments can be found generally in Applicants' Specification at page 17. Therefore, the rejection is moot.

Claim 18 was rejected under 35 U.S.C. § 102(e) as being anticipated by Petrmichl et al. (U.S. Patent No. 5,618,619, "Petrmichl"). In making this rejection the Office Action took the position that Petrmichl discloses all the elements of the claimed

invention. However, Applicants respectfully submit that claim 18 recites subject matter that is neither disclosed nor suggested by Petrmichl.

Applicants' amended claim 18 recites a machine part selected from a group including a vibration damper for an automobile, a sealing member for an automobile, and a rotary member for an image forming apparatus, having a portion to be in contact with another object. The portion is made of an organic polymer material selected from a group including resin and rubber. The portion has a flexible surface entirely or partly coated with a DLC (diamond like carbon) film having a wear resistance and a lubricity as well as a thickness exhibiting flexibility substantially conforming to the flexibility of the surface of the portion.

The Office Action took the position that the prior art discloses all the elements of the claimed invention. However, it is respectfully submitted that the prior art fails to disclose or suggest the structure of the claimed invention, and therefore, fails to provide the advantages of the present invention. For example, the present invention is configured have a portion made of an organic polymer material selected from a group including resin and rubber having a flexible surface. A DLC (diamond like carbon) film is entirely or partly coating the flexible surface of the portion and has a thickness exhibiting flexibility substantially conforming to the flexibility of the surface of the portion.

As a result of this claimed configuration, a good sliding property can be achieved with respect to the contact object because the carbon film has a high resistance against wear.

Petrmichl discloses a method of coating substrates. The substrate surface is etched and an abrasion-resistant coating is deposited on the substrate. A diamond-like carbon may be used as a top layer for the coating.

However, upon review of Petrmichl, it is unclear as to where it is disclosed that a machine part is selected from a group including a vibration damper for an automobile, and a rotary member for an image forming apparatus, having a portion in contact with another object, and the portion being made of inorganic polymer material selected from resin or rubber, the portion having a flexible surface entirely or partly coated with a diamond-like carbon coating, the diamond-like carbon film having a wear resistance, as recited in amended claim 18. It is also unclear as to where it is disclosed that the diamond-like carbon coating has a lubricity as well as a thickness exhibiting flexibility substantially conforming to the flexibility of the surface of the portion, as also recited in claim 18.

Therefore, as discussed above, because Petrmichl does not anticipate claim 18 of the present invention within the meaning of 35 U.S.C. § 102, Applicants respectfully request withdrawal of the rejection.

Claim 22 was rejected under 35 U.S.C. § 102(b) as being anticipated by Minolta (JP 64-090484). In making this rejection the Office Action took the position that Minolta discloses all the elements of the claimed invention. However, Applicants respectfully submit that claim 22 recites subject matter that is neither disclosed nor suggested by JP '484

Applicants' amended claim 22 recites a wiper blade employed in a machine, and having a portion to be in contact with water and a window pane of the machine, the

portion being made of an organic polymer material selected from a group including resin and rubber, and the portion having a flexible surface entirely or partly coated with a DLC (diamond like carbon) film having a wear resistance and a lubricity as well as a water repellency, and having a thickness exhibiting flexibility substantially conforming to the flexibility of the surface of the portion.

However, unlike the present invention, Minolta merely discloses an image forming apparatus part, which is a cleaning blade, for cleaning residual toner on a photosensitive member in an electrophotographic image forming apparatus. The part is made of an organic polymer material and coated with an amorphous carbon film.

Thus, Minolta fails to disclose or suggest a wiper blade used in a machine having a portion in contact with water and a window pane of the machine, the portion being made of an organic polymer material selected from a group including resin and rubber, and the portion having a flexible surface entirely or partly coated with a DLC (diamond like carbon) film having a wear resistance and a lubricity as well as a water repellency, and having a thickness exhibiting flexibility substantially conforming to the flexibility of the surface of said portion, as recited in amended claim 22.

Therefore, it is respectfully submitted that the Applicants' invention, as set forth in claim 22, is not anticipated within the meaning of 35 U.S.C. § 102.

Claim 19 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Showa Denko (JP 04 136172) in view of Nakahigashi et al. (U.S. Patent No. 5,562,952, "Nakahigashi") or TDK (abstract of JP 04 041672) or Yamazaki et al. (U.S. Patent

No. 5,230,931[1], "Yamazaki") or Itoh (U.S. Patent No. 4,996,079) or Thaler (U.S. Patent No. 4,981,717).

However, Applicants traverse the rejection, and respectfully submit that claim 19 recites subject matter that is neither disclosed nor suggested by any combination of the prior art.

Applicants' amended claim 19 recites a machine part selected from a group including a machine part selected from a group including a hose, a sealing member, and a sheet, each employed in a machine, and having a portion in contact with another object. The portion is made of an organic polymer material selected from a group including resin and rubber. The portion has a flexible surface entirely or partly coated with a DLC (diamond like carbon) film having a wear resistance and a lubricity, as well as a gas barrier property, and has a thickness exhibiting flexibility substantially conforming to the flexibility of the surface of the portion.

In making this rejection, it was asserted in the Office Action that although JP '172 only discloses carbon coatings on pipes, Official Notice was taken that pipes made of polymer are well-known in the art. Nakahigashi, JP '672, Yamazaki, Itoh, or Thaler were cited for disclosing that a carbon coating is known on polymeric substrates to provide protection.

However, JP '172 only discloses a method of coating an inner surface of a pipe or a ball made of a non-metallic material such as quartz, alumina, silicon nitride or silicon carbide with a diamond by microwave plasma CVD. Thus, JP '172 fails to disclose or suggest a machine part having a portion with a flexible surface entirely or

[1] The Office Action inadvertently referred to Yamazaki as U.S. Patent No. 5,230,930.

partly coated with a diamond like carbon, as recited in amended claim 19. The diamond like carbon coating is different from the diamond coating. (See for example, Petrmichl, column 5, lines 54-64).

Itoh fails to cure the deficiencies of JP '172. Itoh discloses a method of depositing thin films consisting mainly of carbon. More specifically, Itoh teaches depositing a carbon material upon a surface such a semiconductor, glass, metal, ceramic and other such materials.

Therefore, Itoh does not disclose or suggest a machine part including a hose, a sealing member, and a sheet, configured to have a portion made of an organic polymer material selected from a group including resin and rubber having a flexible surface, where a DLC (diamond like carbon) film is entirely or partly coating the flexible surface of the portion and has a thickness exhibiting flexibility substantially conforming to the flexibility of the surface of the portion, as recited in amended claim 19.

Thaler also fails to cure the deficiencies of JP '172. Thaler discloses a diamond like coating and method of forming the same. Specifically, Thaler discloses a diamond-like coating that is provided as a protective coating for sliding wear parts such as valves, pistons, and bearings. Thaler also discloses the film having a high degree of lubricity as well as hardness and durability.

Thus, Thaler also does not disclose or suggest a machine part including a hose, a sealing member, and a sheet configured to have a portion made of an organic polymer material selected from a group including resin and rubber having a flexible surface, where a DLC (diamond like carbon) film is entirely or partly coating the flexible

surface of the portion and has a thickness exhibiting flexibility substantially conforming to the flexibility of the surface of the portion, as recited in amended claim 19.

Nakahigashi also fails to cure the deficiencies of JP '172. Nakahigashi discloses a plasma CVD method and apparatus wherein the generation of radicals that cause the generation of dust particles are suppressed without preventing the generation of radicals that contribute to film deposition.

Therefore, Nakahigashi also fails to does not disclose or suggest a machine part including a hose, a sealing member, and a sheet configured to have a portion made of an organic polymer material selected from a group including resin and rubber having a flexible surface, where a DLC (diamond like carbon) film is entirely or partly coating the flexible surface of the portion and has a thickness exhibiting flexibility substantially conforming to the flexibility of the surface of the portion, as recited in amended claim 19.

Yamazaki also fails to cure the deficiencies of JP '172. Yamazaki discloses a plasma apparatus for depositing carbon material on a surface in accordance.

Thus, Yamazaki also does not disclose or suggest a machine part including a hose, a sealing member, and a sheet configured to have a portion made of an organic polymer material selected from a group including resin and rubber having a flexible surface, where a DLC (diamond like carbon) film is entirely or partly coating the flexible surface of the portion and has a thickness exhibiting flexibility substantially conforming to the flexibility of the surface of the portion, as recited in amended claim 19.

JP '672 also fails to cure the deficiencies of JP '172. JP '672 discloses a process that controls the hardness of C membrane prepared by a plasma CVS process.

Therefore, JP '672 also does not disclose or suggest a machine part including a

hose, a sealing member, and a sheet configured to have a portion made of an organic polymer material selected from a group including resin and rubber having a flexible surface, where a DLC (diamond like carbon) film is entirely or partly coating the flexible surface of the portion and has a thickness exhibiting flexibility substantially conforming to the flexibility of the surface of the portion, as recited in amended claim 19.

Thus, as discussed above, Applicants submit that neither JP '172, Nakahigashi, Yamazaki, JP '672, Itoh or Thaler, either alone or in combination, discloses or suggests the claimed invention.

Although the Office Action asserted that it would have been obvious to one of ordinary skill in the art to provide polymeric pipes with a protective carbon coating, it is unclear as to which portion the being equating as the claimed "portion."

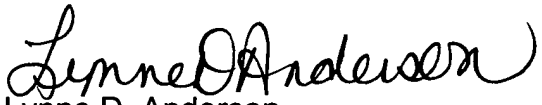
Therefore, it is respectfully submitted that the Applicants' invention, as set forth in claim 19 is not obvious within the meaning of 35 U.S.C. § 103.

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of claims 18, 19 and 22, (claim 21 already being allowed) and the prompt issuance of a Notice of Allowability are respectfully solicited.

If this application is not in condition for allowance, the Examiner is requested to contact the undersigned at the telephone listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 107351-00001.**

Respectfully submitted,



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